

REMARKS

Reconsideration and withdrawal of the examiner's rejections under 35 USC § 103 is respectfully requested in view of the above amendments and the following remarks. The applicant would like to thank the examiner for her time and kind cooperation in this matter.

35 USC § 103

The examiner has rejected claims 1, 3, 4 and 7 under 35 U.S.C. 103(a) as being unpatentable over Allen (US 5,510,004). The examiner asserts the following:

Allen teaches paper containing azetidinium halide polymers comprising monomers such as dimethylaminoethylmethacrylate, diallylamine and hydroxyethyl methacrylate (column 4, lines 35-45). Allen further teaches that the polymers are applied to paper after sheet formation from 0.1-5 wt percent based on the dry weight of the paper pulp (column 5, lines 19-30). Allen further teaches the textile compatible carrier of water because the polymers are provided onto paper in the form of an aqueous solution (column 5, lines 1-15).

Allen does not teach all the instantly claimed embodiments in a single example.

The examiner further asserts that it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results and that it would have nonetheless been obvious to the skilled artisan to product the claimed compositin, as the reference teaches each of the claimed ingredients within the claimed proportions for the same utility.

The examiner has rejected claims 1, 3 and 5-10 under 35 U.S.C. 103(a) as being unpatentable over Nagasuna, et al., (US 6,297,319). The examiner asserts the following:

Nagasuna, et al., teach water absorbing polymer comprising polyethylene glycol mono(meth)acrylate (column 5, lines 35-40), 2-aminomethacrylate (column 9, lines 40-45; column 11, lines 9-12), polyethyleneimine azetidunium salt (column 13, lines 40-45),

polyethylene glycol diglycidyl ether (column 7, lines 24-25) and water (column 12, lines 20-30). The composition coated on diapers for the benefit of water absorbancy.

Nagasuna, et al., do not teach all the instantly claimed embodiments in a single example.

The examiner further asserts that it would have been obvious to the skilled artisan to produce the claimed composition, as Nagasuna, et al., teach the absorbency benefits provided by each of the claimed ingredients for the production of a water absorbent textile. One of ordinary skill in the art would have been motivated to select these components for optimization of absorbency benefits absent unexpected results.

The examiner has rejected claim 11 under 35 U.S.C. 103(a) as being unpatentable over Nagasuna, et al., (US 6,297,319) as applied to the claims above and further in view of Evans (US 5,534,038) asserting that Nagasuna, et al., are relied upon as set forth above.

Nagasuna, et al., do not teach polymers comprising 1,1,3,3,5,5-hexafluoroisopropyl methacrylate.

Evans teaches adding 1,1,1,3,3,3- hexafluoroisopropyl methacrylate monomers (column 6, lines 35-36) to polymers for the benefit of producing added absorption of water in such products as disposable diapers (column 11, lines 20-25), and asserting that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the polymers of Nagasuna, et al., by incorporating the hexafluoroisopropyl methacrylate monomers as taught by Evans because Evans teaches the added water absorbance imparted to disposable diapers when these monomers are included in the polymer.

In response, applicants have amended independent claim 1 to clearly distinguish the instant invention over Allen, Nagasuna, et al., and further in view of Evans, for the reasons discussed below. Support for the amendments are claim 3 and from page 12, lines 10-12 of the specification. Claims 4-7 have been amended so that the claims do not depend on cancelled claim 3.

Applicants have surprisingly discovered that the disadvantages of the prior art azetidinium groups in laundry use (i.e., the formation of permanent cationic groups) are overcome by the present invention by incorporating secondary amine sites into the finished azetidinium polymer so that crosslinking can occur without the formation of a cationic center, so that staining is reduced and thus the color properties of the fabric are improved (see examples).

None of the art cited by the examiner are concerned with the technical field of textile treatment, nor with the problems specified in the current application (see pg. 3, line 7 – page 4) and are therefore nonanalogous art. Allen is concerned with increasing wet paper strength, Nagasuna, et al., is concerned with water absorbent resins (for diapers as an example), while Evans is directed to a process for contact lens tinting. The skilled person would not consider such documents as relevant starting points as nowhere in any cited document is there a teaching for textile treatment. Even if the skilled person did look at these documents, they would not find any suggestion or motivation for modifying the prior art to arrive at the invention as currently claimed.

Allen teaches azetidinium polymers as paper finishers, specifically for increasing the wet strength of paper (col. 2, lines 47-49). Allen teaches a polymer or copolymer of N, N-diallyl-3-hydroxy azetidinium halides (see summary of invention). This monomer does not contain any secondary groups, so the resulting polymer cannot contain secondary amine groups (see diagram on col. 3). This polymer would have the same disadvantage of the prior art, namely that crosslinking could not occur without the formation of a cationic center.

While Allen discloses that a copolymer may be used and may contain monomers (such as diallylamine) which have secondary groups; including possible co-monomers for the polymer (col. 4, line 15 onwards); there is no suggestion to specifically pick those which have secondary groups, nor that such polymers would be useful in the textile treatment composition as currently claimed absent impermissible hindsight.

With regards to the amended claim 1 (the composition claim), Allen does not teach the polymer in combination with textile compatible carriers which are specified to be either a detergent active compound or a textile softening or conditioning agent. Allen only discloses 'water' which is outside the definition of detergent active compounds given on page 12, lines 10-12. Thus Allen does not teach or suggest a textile compatible carrier as claimed, and so amended claim 1 is unobvious over Allen.

Nagasuna, et al., teaches a water-absorbing agent made by treating a water-absorbent resin with an oxazoline compound of specified structure. For similar reasons stated above for Allen, Nagasuna would not provide motivation to the skilled person for making the claimed polymer, as they would have to choose specific embodiments from col. 5, lines 35 and col. 13, lines 40-45 relating to the monomers and azetidinium groups respectively. There is no motivation for the skilled person combining disclosed embodiments of Nagasuna absent impermissible hindsight.

Furthermore, there is no motivation from Nagasuna to combine the polymer with a textile compatible carrier absent impermissible hindsight.

Evans (US 5,534,038) does not remedy the deficiencies of Nagasuna, et al., for the subject matter of claim 11.

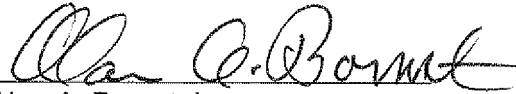
Evans is concerned with the unrelated field of contact lens tinting. It does not disclose the azetidinium polymer containing secondary amine groups, or the textile compatible carrier as required by amended claim 1. Any combination of Nagasuna and Evans is therefore deficient with respect to amended claim 1 as all claim features are not recited in these references.

CONCLUSION

In summary, claims 1 and 4-7 have been amended and claim 3 has been cancelled as being redundant. No new matter has been added by these amendments.

In light of the above remarks, applicants submit that the claims now pending in the present application are in condition for allowance. Reconsideration and allowance of the application is respectfully requested. The examiner is invited to contact the undersigned if there are any questions concerning the case.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Alan A. Bornstein", written over a horizontal line.

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